

DAS AirBite: Human factors considerations (15-minute teaching session for all airway teams)

Background and content:

Activities:

- Explore key human factors risks across Plans A-D
- Discuss types of bias relevant to airway management
- Explore and practice graded authority assertiveness
- Discuss the importance of Non-Technical Skills (NTS) in the management of unanticipated difficult airways

Equipment required:

- Human Factors in Plan A-D Infographics (Found in Additional resources on DAS education package)

Intended Learning Objectives:

Learners should be able to:

- Identify and describe human factors elements that contribute to failure in airway management.
- Recognise and analyse common cognitive biases encountered during airway events and select appropriate mitigation strategies.
- Demonstrate the use of graded assertiveness techniques to escalate concerns and advocate for patient safety.
- Apply the NTS framework to evaluate performance and formulate personal learning goals for future development

Failed intubation is frequently driven by human factors rather than purely technical failure. Addressing these factors is critical to improving airway safety and reducing preventable harm.

1. Human factors – learning from incidents

Why do competent clinicians still fail in airway crises?

- Cognitive Bias and Poor Decision-Making
- Cognitive Overload and Loss of Situational Awareness
- Training, Familiarity, and Skill Gaps
- Communication, Teamwork, and Hierarchy Barriers
- Organisational Culture and Behavioural Norms
- System and Equipment Design Weaknesses
- Escalation and Support Failures

Please refer to the Human Factors in Plan A-D Infographics for further details

3. Graded authority assertiveness tools

If you were worried and felt the team should transition to the next step in the algorithm, what would you say?

- C – "I am **Concerned** about..."
- U – "I am **Uncomfortable** with..." (Explain why)
- S – "This is a **Safety** issue."
- S – "**Stop** what you are doing!"

Practice in small groups

2. Cognitive bias in airway management

What types of bias can occur?

- *Plan continuation bias* - Unconscious bias to continue the original plan despite failure and increasing risk
- *Optimism bias, frequency bias and recency bias* - the belief that there will most likely be a good outcome, particularly if the individual has never experienced the bad outcome
- *Confirmation bias* – a phenomenon where we give more weight to information that supports existing beliefs

What counteracts bias?

- Standardised pre-agreed triggers to prompt transition
- Empowered team challenge
- Encourage cross checking behaviours

4. NTS: Non-Technical Skills

What comprises the Anaesthetic NTS framework applied to airway management?



***What is one ANTS behaviour you will deliberately practice on your next case?
How will you know you've improved?***

Follow up activities:

1. Signpost to DAS website for full guideline, algorithms and educational videos
2. Consider reviewing other DAS educational materials including AirDrills for low fidelity simulation, AirDeck for further explanations and examples and AirSim scenarios for interprofessional high fidelity simulation.

Feedback here:

